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Rural industrialization

Weijland, H.

1990

90-88

Faculteit der Economische Wetenschappen en Econometrie

Serie Research Memoranda

Rural Industrialization: Fact or Fiction?

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Research Memorandum 1990-88
December 1990

vrije Universiteit *amsterdam*

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Table of Contents

RURAL INDUSTRIALIZATION: FACT OR FICTION?

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Summary

Rural Industrialization may be considered a remedy against rural unemployment and poverty, but it might not be a feasible option. The paper attempts to give insight in the transformation of rural industry in Indonesia, showing that cottage industry is bound to decline during the process of rural development, and that the poorest workers are opting out as soon as better alternatives are offered.

1. Why Rural Industrialization?

Rural Small Scale Industry (RSSI) and Rural Home Industry (RHI) have become a new focus of development planning in Indonesia since the end of the seventies, the time the economy had reached rapid growth in industry and stable growth in agriculture. It appeared then that rural employment was still far from satisfactory and seemed to worsen with increasing commercialization and rising agricultural productivity. So rural industry was thought to contribute to the solution of this problem in the same way it already had in other densely populated Asian countries such as China, Taiwan, India, and Pakistan, where its acclaimed merits are manifold [*Chuta and Sethuraman 1984*].

Apart from serving as an instrument for decentralization, Rural Industry (RI) should have many favourable social and economic effects. For one, it can gainfully utilize abundant agrarian resources such as underemployed labour and primary materials. Sharing labour, equipment and housing, its activities can be combined with farming, which, in principle, raises rural income. For another, it encourages agricultural commercialization through the processing of local materials, for which the export potential is high, whereas capital requirements and import content are low [*UNIDO 1978*]. Furthermore, RI can repair and produce simple machinery and equipment for the farmers and local entrepreneurs who cannot afford sophisticated products or are not able to communicate with urban enterprises [*UNDP et al. 1988*].

However, in order to keep in business, the traditional rural enterprises would have to improve their production methods and widen their markets. Such a transformation would be a lengthy and painful process in Indonesia, as its Rural Industry still consists predominantly of traditional home industries that are still integrated in the peasant household economy and firmly rooted in the traditional village community.

Because of its primitive outlook, economists first held the view that rural industry in Indonesia would vanish in the course of broadly based agricultural development. This opinion changed in the beginning of the eighties when it was estimated that RI responded favourably to the dynamism of the rural economy; even in the smallest RI category, Home Industry (1 to 5

workers), employment growth had been reported to accelerate from some 2.5 to 15 percent per year [*BPS 1985*]. So the belief spread that RI could and should benefit from economic growth. Unfortunately, recent census data show a stagnant home industry, with certain branches in fierce decline [*BPS 1987a: 94-95*]. On the other hand, Medium and Large Scale Urban Industries are continuing their rapid growth. Such tendencies were not expected; on the contrary, Repelita IV even had projected a growth rate for home and small-industry employment of 5.5 percent. The sudden decline of Home Industry therefore has been taken as an untimely sign, and public policy was taken at fault. Protectionist macro-policies allegedly would have depressed the competitiveness of small enterprises, and the promised assistance would have been inefficient and ineffective [*Dawan Rahardjo 1987; Hasibuan 1987*]. However, these arguments are not convincing. Protection has not increased since the seventies, and it is hard to explain why it suddenly has such a negative impact on the small rural industries. The same holds for the sector-specific policies. Most probably, only a very small part of Rural Industry was ever assisted, and a change in policy or drop of funds could not have mattered much. It seems therefore plausible that a better explanation for the unexpected trends might be found at the micro level, in the rural areas.

This paper intends to show that a fall in employment in Rural Home Industry might indicate that transition has set in regardless of government interference. Since agrarian incomes are rising, markets widening and trade channels diversifying, RI is disengaging from the agrarian households and is now establishing separate, specialized and more productive units.

2. Special Nature and Dynamics of Rural Industry

Rural Industry, as distinct from urban industry (UI), is much closer connected to the agricultural sector and its farm households. Consequently, it is less specialized than UI; it represents only one element of the complementary and supplementary activities of rural households, which must spend part of their working time in agriculture. Most RI activities therefore fluctuate adversely with the agricultural seasons. Another essential characteristic of RI is its isolated location, which has specific advantages and disadvantages.

RI and agriculture are mutually dependent. While agricultural income creates a market for RI, the latter provides an additional source of income and thus strengthens the agricultural base, making farming less sensitive to yield fluctuations. Thus growth of agriculture may encourage RI, and vice versa, growth of RI may support agriculture. However, as rural isolation decreases, certain branches of RI will face competition from UI. Therefore, a number of rural industrial activities will decline as rural development proceeds. On the other hand, new industrial activities can be started when rural income is rising, and transport and communication improving. Which industries emerge depends on the kind of agricultural development and the institutional environment. Economic policies of national, regional and local authorities will be of substantial influence.

Especially in the early stages of rural transformation, when isolated rural areas are incorporated in the larger economy, certain small rural industries are outcompeted by larger urban and foreign enterprises. This points to decreasing locational advantages, which are the driving force behind rural/urban specialization. These advantages may be divided into four components: (1) market orientation, (2) resource availability, (3) supply of cheap labour, and (4) technical specifications. Backed by one or a combination of these advantages, RI activities have to overcome a common locational disadvantage: lack of public infrastructure such as electricity, piped water, good roads, adequate banking services, and information.

(1) Market orientation.

Focusing on market orientation, rural industrial products can be ranked from non-tradable to foot-loose goods. Non-tradable goods do not suffer from urban competition, but they remain limited to a small local market. Most of such goods are tailored to the special demands of the local clients and depend on personal producer-client contacts. The size of the local market depends on the local income level and the number of households that can be directly served. As is shown by a cross-section study, prospering agriculture, high population density and good communications contribute substantially to the size of the home market and the development of this category of rural industry [*Weijland 1990*]. Rural manufacturing of tradable goods, that are oriented to local markets but have weak marketing and transport advantages, and that lack other locational advantages, will hardly survive, or disappear altogether in the process of integration in the larger economy. Many light consumer goods fall within this category of activities (dress-making, shoe-making, pottery, beer-brewing).

(2) Resource availability.

Certain Rural Industries have the potential to compete with urban industries, and some even manage to export their products as they enjoy a relatively cheap supply of local materials. A variety of rural materials can be profitably processed by RI in order to make them less perishable and/or less bulky, so that they can be transported to distant markets. Examples of such industries are dairy production, sugar refinery, rice milling, fruit and vegetable preservation, tobacco drying and fermenting, and the production of timber, charcoal, cement, bricks and tiles.

(3) Supply of cheap labour.

RI lacking both the advantage of market orientation and resource availability may still be able to compete with UI if it can mobilize local cheap labour. 'Low-wage Industry', as it may be called, produces mostly light consumer goods. Examples are handicrafts such as weaving, knitting, embroidering; and the production of footwear and light household equipment. In contrast to resource-based industry, Low-wage Industry is foot-loose as its raw materials are imported from urban areas or abroad. Insufficient supply of such inputs is a crucial constraint for this industry. It is also continually threatened by large urban and foreign enterprises as its locational advantage tends to decrease when rural incomes rise. Low-wage RI is often subcontracted by urban industry or traders who can make a profit from the vast reserves of 'residual' labour supply by farm households on a part-time or seasonal base. This category therefore links rural to urban industry in a subordinate way.

(4) Technical requirements of production.

The higher the technical requirements, the less appropriate is the product for rural enterprise. Technical requirements are derived from product and process specifications. Important elements are: size or bulkiness, homogeneity, precision, complexity, and degree of standardization. Isolated rural enterprises are not suited for the production of large, complex products (for instance, cars) that are composed of many parts that require separate production lines or must be bought in distant markets. Rural enterprise prefers small and simple products. Standardization, however, is an enemy of rural industry, for it yields economies of scale that can be reaped only in large scale production. Precision, however, can be fitted in with rural production. Although it requires good craftsmanship, it does not demand many skilled workers at the same place. Thus watch making became a famous rural activity in Switzerland.

As the range of products with various technological requirements grows with development, the number of possible activities to be undertaken by rural enterprises also grows. However, rural enterprises have to adapt continually to changing technology trends, which change the bunch of most suitable products. New possibilities emerge all the time, while old ones become less attractive. The stronger and larger rural enterprises might take advantage of such changes, but the poor and isolated enterprises can hardly follow and many must give up.

Having classified Rural Industry according to advantage in market orientation, availability of resources, supply of labour and technical specifications, we can draw some general conclusions about the future course of the various activities. Rural industries oriented towards urban markets, with easy access to materials and labour, and adequate technical specifications, benefit from decreasing transport and marketing costs, and therefore enlarge their scale of operation. Consequently, local competition for resources increases and, if scale economies are important, expansion of the larger units sets in. A gradual shift from family labour towards wage labour is then to be expected, and activities will concentrate where resources are abundant.

Rural Industries that benefit from the protection of isolation will remain relatively small in scale. Local competition may be fierce within activities with low barriers to entry. If this industry is skill-intensive and specialized, it may cluster as small modern or traditional industry in the larger rural centres. The degree to which this category may prosper is less determined by urban expansion than by local income growth and the income elasticities of the goods produced. In general, industries producing new, modern products will grow even if income levels remain stagnant, because substitution takes place at the expense of the goods produced by traditional industries.

Certain rural industries that do not possess an advantage over urban industries can still remain in business by accepting low returns to labour. However, increasing urban competition through higher quality or lower prices will degrade such rural industries to the supply-push category, and eventually make them redundant.

So economic development is not invariably favourable for Rural Industry. Part of the consumers' and most of the producers' demand is shifting to non-basic and more sophisticated products belonging to the activities that are preferably located in urban areas. Nevertheless, locational advantages of RI remain high for traditional, resource-based branches such as food, leather and wood industry, where scale economies are relatively small and technical specifications suitable. RI may even prosper in dynamic modern branches such as furniture, rubber products, and small metal equipment, which have high-income elasticities but lack substantial scale economies.

3. The Need for Classification; Stagnant and Dynamic Industries

In order to analyze RI's prospects, a distinction has to be made between activities or sectors with or without growth potential in rural areas. A well-known and simple economic unit of analysis is the activity or subsector distinguished by the ISIC (International Standard Classification of all Industrial Activities). Examples of activities are rice milling and polishing (ISIC 31161), kretek cigarette manufacturing (ISIC 31420), and roof tiles manufacturing (ISIC 36420). There are good reasons for using such clearly defined activities. At this level, locational advantages can be easiest determined, and a framework can be developed for the assessment of the viability and potential of rural industrial activities against similar urban activities.

A disadvantage of activity analysis is its data requirement. To overcome this, activities can be grouped into branches with similar technological and/or market characteristics. Such branches are commonly used in economic analysis. For example, using data from a 1975 Philippine population census, Fabella investigated the effects of rural modernization on major groups of activities (branch of industry at 2 digits). Modernization was proxied by improvements in education, rural electrification, tractorization, road density, income, and banking institutions. Such improvements were found to have different effects on specific branches. Fast growing branches were food, footwear, wood, furniture, leather, printing and rubber. On the other hand, tobacco, beverages and textile lagged behind or declined [*Fabella 1987*].

The above results, however, do not explain why certain branches prosper more than others in the countryside. As we have elaborated before, one has to identify the particular advantages that give economic strength and flexibility to rural industry.

A completely different approach to the transition of rural industry is a multidisciplinary classification in sectors according to a bunch of criteria including economic, social and juridical aspects. Such classifications, however, have the disadvantage that they create 'ideal-types'. By imposing dividing lines upon a continuity they invite much criticism, particularly from the side of sociologists. Economists, however, usually endorse such divisions of RI, as they appreciate models with distinct economic actors. Moreover, such a distinction seems to be corroborated by empirical observations. For on the one hand, enterprises emerge that require education and skill, and yield good returns, while on the other hand one observes a proliferation of badly paid employment in home industry. The wage rate for agricultural workers might be used as a

dividing criterion. Islam argues that in a predominantly agrarian society, this wage rate can be seen as the floor below which occupations assume a residual character. People are driven towards these jobs only if no other work can be found [*Islam 1984:314-19*].

This view is supported by Mukhopadhyay, who contends that much of the confusion and controversy about the development potential of RI disappears if one realizes that this sector has a rather sharp bimodal structure [*Mukhopadhyay 1985:966*]. He distinguishes two broad prototypes of RI activities:

(1) a sector in which enterprises are run on a more or less stable basis with a view on surplus generation and growth, using primarily hired labour and more sophisticated technology;

(2) a sector with activities that are often seasonal, run with the help of primarily unpaid family labour, using primitive technology and catering mostly to the local market.

According to Mukhopadhyay these bunches of characteristics usually go together and divide the nonfarm sector right down the middle. He found that the lower sector grows with unemployment; it responds more to the supply side of the labour market than to market demand for output. This sector tends to grow with landlessness. In areas where the incidence of landlessness is high, such as Bangladesh, India, Pakistan, and the Philippines, employment in the lower sector is also high, whereas in Korea, where landlessness is less pressing, the lower sector employs relatively few workers.

The sectors are differently linked to agricultural production. Years of good harvests imply steady growth for the upper sector and stagnation for the lower, whereas years of bad harvests cause stagnation in the upper sector and overcrowding in the lower one.

It follows that increasing numbers of RI employment do not necessarily imply rural development and equalization of incomes. On the contrary, the growth of the lower-end activities, which depends on a 'labour supply push', should not be seen as a sign of progress, but of poverty.

4. Target Groups for Industrialization Policy

For policy purposes it is expedient to define target groups with easily identifiable characteristics that appeal to special development institutions with specific policy instruments. A major distinction then should be made according to the level of technology, reflected by managerial capacity, capital intensity, access to infrastructure and technical information. Each technological level may be served by specific institutions, which should support their particular clients with appropriate instruments in the field of training, finance, and infrastructural services. Second, it is useful to differentiate according to size of enterprise and market orientation, as scale and marketing is a major problem in rural areas. Furthermore, in order to give priority to the more important or more dynamic income sources, one should consider the function of the rural enterprises for the rural households. So it is expedient to differentiate at least between primary and secondary income activities. Finally, attention should be given to the wider network of linkages and dependent relationships. Many large and small rural entrepreneurs can make crucial decisions only with the approval of the owners or lenders of their business capital. Those who

have hired their workshops, mortgaged their equipment, or have made subcontracting arrangements with middlemen, are in a bad position to receive technical assistance and adopt innovations.

With the above considerations in mind, the following main target groups can be distinguished:

Technology	Size
Modern:	Small to Large Modern Industry
Traditional:	Small Workshops to Large Traditional Industry
Primitive:	Self-employed to Extended Home Industry

The proposed division indicates that mobility occurs predominantly within and not between the technologically defined categories. The differences between large and small are not accentuated; within the three technological categories small and large business constitute a range rather than two opposite modes, and the transition from small to large can be done gradually. However, jumping to a higher level of technology is considered almost impossible. Such a structural change is supposedly beyond the reach of the individual entrepreneur living in the countryside. Modern entrepreneurs start from a higher schooling level than can be found in traditional enterprise; they usually have a better family background and better access to credit facilities and essential public services [*Harriss 1980:142-43, UNDP et al. 1988*]. Traditional entrepreneurs are unable to reach a modern level, but they can move within the range of their technological and managerial capabilities stemming from innate capacity and informal training. Often aided by traders or outcontracters, they may respond to improvements in communication and consequent changes in the local product and labour markets. However, even though these changes encourage the establishment and growth of many traditional rural enterprises, they cannot achieve that the semi-illiterate traditional workers become technicians and modern businessmen. Unfortunately, prospects are even worse for the workers in primitive home industry, whose low level of schooling and industrial skills permits hardly any individual progress.

When travelling through the countryside, one can easily see and hear the differences between the three main categories. Particularly the differences in fixed assets are evident. For instance, in Indonesia a typical modern enterprise has a fixed capital worth of more than Rp. 10 million per worker, the traditional one can work with less than Rp. 500,000, and home industry with less than Rp. 10,000 per worker. Only when putters-out or outcontracting firms enter the latter industry does the worth of HI equipment tend to rise.

There is also an audible difference: modern industry managers usually speak english, traditional entrepreneurs master the national language, and home industry workers often can be approached only in a local language or dialect. This tendency reflects the wide schooling differences between the three groups, which range from academic to illiterate. Where the modern entrepreneur is able to set up a detailed production plan, the traditional artisanat usually is just able to do some simple book keeping, while the HI workers can hardly keep track of their economic activities.

The latter often end up with less earnings than the lowest current wage rate, or even with a deficit [*Liedholm and Mead 1986:79*]. Wages in the distinct categories vary accordingly. For example, in Aceh the lowest HI activities undertaken by women fetched in 1987 on average only Rp. 1000 a day, while in some cases a deficit occurred. The lowest wage for unskilled adult males in traditional small industry was 2000, and in traditional large industry 3000 rupiahs. A highly skilled labourer in traditional large industry even reported a wage as high as Rp. 17,000 [*Weijland et al. 1987:48*]. It has to be noted, however, that these discrepancies in earnings did not reflect the overall differences in the levels of living of the various workers, for the lower-end activities served only to obtain supplementary household incomes at irregular intervals, whereas the higher-end activities yielded primary incomes for entire families. The primary activities were undertaken more regularly and for longer hours per day. In the given example of Aceh, the women who earned Rp. 1000 worked only a few months a year in their industry (salt boiling), whereas the man who earned Rp. 17,000 worked regularly more than 8 hours a day (as a tile presser).

The wide discrepancies between the three industrial groups sketched above might be more typical for rural than for urban industry. Isolation of rural areas leads to greater labour market imperfections, so that the earnings in the Home Industries of remote villages can be considerably less than in the Traditional Small Industries in the larger village centres and towns. Isolation also leads to less communication, and correspondingly wider differentiation of technology levels among the industrial (sub)categories. Furthermore, village workers cannot buy second-hand machinery as easily as their colleagues in larger communities, and neither do they have access to formal credit. All these disadvantages add up to wider differentiation in levels of technology and income. It should be emphasized, that the above discrepancies occur just as well within as between branches of industry. For example, in Indonesia roof tiles are produced in various ways. The most primitive technique without any division of labour is applied in isolated villages, where part-time and seasonal household workers use only wooden boards as presses and piles of firewood for baking. Their products are sold to poor local clients only. Nearer to the market centres, tile production becomes a specialized traditional trade, requiring at least four persons with distinct tasks and special equipment, and a small brick oven. Tiles produced this way are already of much better quality, and traded at longer distances to higher-income markets. Finally, the industry tends to grow into large brick yards with huge kilns, employing more than a hundred workers [*Sandee and Weijland 1989*].

So there are many viable rural industrial activities at all levels of technology, competing with urban enterprise as they have locational advantages based on local resources, market isolation, the nature of their product, or the cheapness of their labour. But however varied in nature and location, they seem to obey certain rules derived from distinct technological levels, so that they become identifiable as rather homogeneous clusters of activities which tend to assume an identity of their own.

5. Growth Trends of Rural Industry in Indonesia

The Indonesian government pursues an inward-oriented, protectionistic industrialization strategy, and encourages the establishment of large firms in urban areas, notably in Jakarta and Surabaya. Industrial growth is therefore dominated by a relatively small number of capital intensive enterprises. During the seventies and the early eighties, production in heavy industry increased rapidly with annual growth rates as high as 20 percent, and employment in large industry grew at a rate of 10 percent, reaching a level of some 1.3 million workers in 1986; see Table 1 (Appendix).

However, traditional Home Industry (HI) still employed more than half of the labour force in manufacturing at that time. The estimation of employment trends for HI proves to be more difficult. The successive census and survey statistics, reported in Table 2 (Appendix), give rather erratic fluctuations of employment in HI. According to the recent 1986 census, HI employment is falling so fast that growth in larger scale industry can hardly compensate the loss. So it seems that the manufacturing sector as a whole responds only marginally to the fast growing demand for employment, and some economists believe that particularly the traditional part of the sector is in a bad situation. Such a belief, however, is contradicted by the productivity trends shown in Table 3 (Appendix), indicating rapidly rising productivity for that sector. This productivity growth outstrips the development of the larger scale categories, so that the degree of dualism in the manufacturing sector can be observed to decline.

With the help of these global and other more detailed statistics it can be argued that a process of rural transformation has set in, with substantial gains in employment opportunities for the rural poor.

6. The Transformation of Rural Industry

The most plausible economic definition of a rural region is an area where agriculture is the single most important source of income. For administrative purposes other criteria might apply. In Indonesia, population density and infrastructural quality are also used to separate urban from rural areas. But whichever definition is used, all lead to similar 'rural' concepts, meaning a style and rhythm of life still predominantly governed by agricultural production cycles and agrarian wealth. So defined, virtually all home industry in Indonesia can be named 'rural'. The phenomenon of declining employment in home industry should therefore be seen as a rural process with rural parameters [1].

If one accepts the fact that the transformation of rural industry is the core of the industrial employment problem, the particular rural conditions that inhibit the development of that part of the sector should be brought to the forefront. Here we stumble on the fact that the wide

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[1] This view is corroborated by census data of rural industry of 1980, shown in Table 4 (Appendix). According to the estimate for all Indonesia, total employment in rural manufacturing numbered 3.0 million, which almost matches the 1979 count of 2.8 million for total home industry in 1979, given in Table 2.

variations between provinces forbid any generalization. This is demonstrated by the growth estimates of RI employment by region, shown in Table 5 (Appendix). Total rural industry employment was reported to rise with only 2.5 percent in Java, whereas it scored a rate of 5 percent in the Outer Islands. How was this difference achieved? The Table reveals that the largest part of the discrepancy is due to the spectacularly high growth rate of male employment in the outer islands. Female employment is sluggish in both regions, although again somewhat higher in the outer islands. So we can learn from Table 5 that slow or even negative employment growth in rural industry might be explained primarily by dwindling female participation. Considering the unexpectedly high female participation shares in both regions, this need not be a negative sign. It might mean that women are finding better or more appropriate jobs.

7. Exodus from Poverty

Traditionally, rural home industry had very poor working conditions, and particularly so for women. Most activities were taken up only incidentally, when an acute shortage of cash occurred. According to national survey statistics for 1978 (SUSENAS 1978), only 4.5 percent of the rural households in Java could subsist from industry or handicraft as a primary source of income, while 7.4 percent reported industry as a supplementary activity. In the other islands these proportions were considerably lower, respectively 2.5 and 4.5 percent. In spite of their long working days, many rural industrial workers did not succeed to pass the poverty line. SUSENAS 1978 statistics indicate that 58 percent of the rural industrial households in Java belonged to the poorest 40 percent of rural households. In the Outer Islands, however, the poverty incidence was only 26.5 percent. More than 60 percent of the industrial workers were self-employed. This category was, on average, the poorest and earned even less than wage labourers [*Chernichovski and Meesook 1984*].

Evidently, rural industry in the seventies was for the greater part a sign of poverty. Much of it was only supplementary activity, and when it was a primary source of income, it was in most cases the only possible option. So it should be anticipated that this category of industry would tend to decline if the rural economy were to grow and better paid jobs became available.
This decline was observed during a lengthy study in a number of villages in Central Java in the period 1983-87 [*Sandee and Weijland 1989*]. It appeared that, as transport facilities improved, many poor men abandoned their poorly paid industrial activities and accepted wage employment elsewhere, and many women started some other activity in trade or services. Some poor farm households could shift their labour away from industry towards farming as irrigation improved and farm productivity increased. Such trends were observed in other parts of Java as well. However, as Table 5 shows, industrial employment was growing unexpectedly fast in the richer islands.

The census for home industry in 1974/75 gives detailed regional information on the provincial discrepancies, showing that home industry did not serve the same purpose everywhere. A cross-province study of these census data indicates that high percentages of employment in home industry corresponded with low levels of productivity and high rates of poverty incidence [*Weijland 1990*]. So the exodus from home industry, observed by the economic census of 1986, could be foreseen. Particularly the low productivity branches - food and notably wood products - scored substantial losses in employment. The wood branch of home industry was halved (Table 6), and this was fortunate, for its productivity was lowest and is now rising at the highest rate (Table 7).

8. Prospects for Rural Industry

This paper argued that rural industrialization implies a long process of declining peasant industry, further specialization of small traditional enterprise, and concentration of production in medium and large enterprise. As is shown in a cross-province study, viable rural industry needs to be linked with urban markets and modern production units [*Weijland 1990*].

Rural industry in Indonesia was in a dismal situation in the mid-seventies. It was mostly serving local markets, and had hardly any connection with urban industry. Agricultural incomes were low and demand for industrial products correspondingly weak. Capital was very scarce, and modern inputs hardly available. Skills and schooling were also very low. On the other hand, seasonal labour was abundantly available. Consequently, RI consisted mainly of self-employed home workers, who supplemented their very low agrarian incomes with primitive or traditional industrial activities. They had little knowledge of marketing, and lacked the capacity to produce whatever the market would require. However, the fast growth of large and medium urban industry, and the stable growth of agriculture, attended with even faster growth of transport, trade and services, is now pulling industrial workers towards better paid occupations, or bending traditional industry towards wider markets and correspondingly better earnings.

So now the rural workers are abandoning their primitive activities or upgrading their traditional enterprise. The women are the first to leave their primitive home industries, preferring retail trade or home work when the option is offered. Meanwhile, traditional crafts are stagnant, because they cannot compete in the widening markets with modern enterprise. On the other hand, larger enterprises of the traditional or semi-modern types are emerging, and modern small industries are now established everywhere in the provincial centres. Subcontracting linkages are also being established by producers and traders. This process of fast RI transition, however, is not observed everywhere in the Indonesian countryside. It occurs mostly in the densely populated areas with good rural-urban communications. In isolated rural areas RI still seems to decline, as the lower-end activities are abandoned and not replaced by better paid activities.

APPENDIX

Table 1. Number of Workers in Manufacturing by Size of Enterprise, 1986

Size	Workers	percentage
Large (100 and more workers)	1.305.869	24.70
Medium (20-99 workers)	378.166	7.16
Small (5-19 workers)	750.311	14.19
Home industry (less than 5)	2.852.190	53.95
Total	1.533.624	100.00

Source: BPS 1987a: Table 9, p.44

Table 2. Employment Growth in Manufacturing, 1974/75 - 1986

	1974/75 (1)	1979 (2)	1982 (3)	1986 (4)	annual growth 1974-86 %
All Sizes	4.904.800	4.491.887	6.396.174	5.286.536	0.50
Large and Medium	661.704	870.019	1.067.017	1.684.035	8.86
Small	343.240	827.035	782.072	750.311	8.13
Home Industry	3.899.856	2.794.833	4.547.085	2.852.190	-2.10

(1) Sensus Industri, BPS
(2) Survei Industri, and SUSENAS, BPS
(3) Survei Industri Besar dan Sedang, BPS
Survei Industri Kerajinan Rumahtangga, BPS
(4) Sensus Ekonomi, BPS

Source: BPS 1987b: Tables 4.2, p.52, and 5.3, p.98
BPS 1987a: Table 9, p.44

Table 3. Productivity in Manufacturing (millions of rupiah)

	1974/75 (1)	1979 (2)	1982 (3)
All Sizes	0.34	1.33	2.01
Large and Medium	1.96	5.32	8.91
Small	0.46	0.73	1.9
Home Industry	0.05	0.27	0.42

(1) Sensus Industri, BPS
(2) Survei Industri, and SUSENAS, BPS
(3) Survei Industri Besar dan Sedang, BPS
Survei Industri Kerajinan Rumahtangga, BPS

Source: BPS 1987b: table 4.2, p.52, and 5.3, p.98

Table 4. Urban/Rural Employment in Manufacturing, 1980

	Employment (thousands)		
	Male	Female	Total
All Indonesia			
Urban	947	382	1329
Rural	1572	1462	3034
Total	2519	1844	4363
Java			
Urban	763	310	1073
Rural	1137	1027	2164
Total	1900	1337	3237
Outer Islands			
Urban	184	72	256
Rural	444	647	1091
Total	628	719	1347

Source: Derived from World Bank 1985: 58-62

Table 5. Urban/Rural Employment growth in Manufacturing, 1971-80

	Annual growth of Employment (perc.)		
	Male	Female	Total
All Indonesia			
Urban	8.1	8.1	8.1
Rural	4.7	1.8	3.1
Total	5.9	3.0	4.5
Java			
Urban	9.5	9.1	9.3
Rural	3.4	1.6	2.5
Total	5.4	3.1	4.4
Outer Islands			
Urban	3.2	3.4	3.3
Rural	9.0	2.5	5.0
Total	7.2	2.6	5.1

Source: see Table 4

Table 6. Employment by Branch in Home Industry, 1974/75 and 1986 (thousands of workers)

All Indonesia

Branch of Industry	1974/75	1986
Food and beverages	1396	1044
Textile and Garments	429	191
Wood and wood products	1630	726
Paper and paper products	9	17
Chemicals	21	13
Non-metal products	263	261
Metal products	56	84
Other	65	390
Total	3862	2726

Source: BPS, 1987a: Table 26, p.94

Table 7. Productivity in Small Scale and Home industry, 1974/75 and 1982 (millions of rupiah)

1974/5	Food prod.	Wood prod.	Metal Prod.	Total
Small Scale Man.	0.75	0.40	0.41	0.46
Home Industry	0.08	0.02	0.11	0.05

1982	Food prod.	Wood prod.	Metal Prod.	Total
Small Scale Man.	2.45	1.93	1.31	1.90
Home Industry	0.57	0.22	0.92	0.42

Source: BPS 1987b: Table 5.3, p. 98

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